

Notice of Allowability

Application No.

10/032,014

Examiner

Yemane M. Gereziher

Applicant(s)

AZAD, MINA M.

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/30/2007.
2. ☒ The allowed claim(s) is/are 27-31, 34-36, 38 and 39 (renumbered 1-10).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

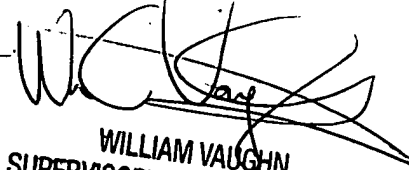
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


WILLIAM VAUGHN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Jeffrey Measures (Reg. No.: 40,272) on December 14, 2007.

In the claims:

- Please cancel claims 24-26, and amend claims 27, 30, 34-36, 38 and 39 as follows:

27. (currently amended) ~~The method of claim 26,~~ A method of segmenting a label switched path (LSP) present in a multi-protocol label switching (MPLS) network, the LSP having an ingress label switched router (LSR), an egress LSR and intermediate nodes, the method comprising steps of:

determining a subpath to be segmented in the LSP;

defining segments in the subpath based on the OAM capability of said intermediate nodes; and

associating a label to each segment defined in the subpath;

wherein the ingress LSR and the egress LSR have an OAM capability;
at least a subset of said intermediate nodes are LSRs having an OAM capability; and
the step of defining segments in the subpath includes defining segments between LSRs having the OAM capability;
and further comprising a step of notifying nodes in the LSP of the segmentation of the subpath, wherein notifying the nodes includes providing information to the nodes regarding a processing of data transfer units (DTUs) labeled in accordance with the labels associated with the segments of the subpath;

30. (currently amended) The method of claim 26 27, wherein the nodes include LSRs lacking the ~~predetermined~~ OAM capability.

34. (currently amended) A method of routing a data transmission unit (DTU) in a multi-protocol label switching (MPLS) network containing a path between an ingress node and an egress node, the method comprising steps of:

determining a subpath of the MPLS network to be segmented in said path, the subpath to be traveled by the DTU;
defining segments of the subpath based on the OAM capability of nodes in said subpath and between LSRs having OAM capability;

defining a label for the DTU in accordance with the labeled segments of the subpath;

providing information to nodes in the path regarding a processing of data transfer units (DTUs) labeled in accordance with the labels associated with the segments of the subpath; and

binding the label to the DTU;

wherein said ingress and egress nodes have OAM capability and said path comprises intermediate nodes having OAM capability.

35. (currently amended) The method of claim ~~33~~ 34, wherein the DTU includes operation and maintenance (OAM) information.

36. (currently amended) A method of determining a performance of a path within a multi-protocol label switching (MPLS) network, the method comprising steps of:

generating a data transmission unit (DTU) having operation and maintenance (OAM) information;

determining a subpath of the MPLS network, the subpath to be traveled by the DTU;

defining segments in the subpath based on the OAM capability of nodes in said labeled segments and between LSRs having OAM capability;

defining a label for the DTU in accordance with labeled segments of the subpath;

providing information to nodes in the path regarding a processing of data transfer units (DTUs) labeled in accordance with the labels associated with the segments of the subpath;

binding the label to the DTU; and

inputting the DTU to the MPLS network, ~~the predetermined path having nodes for processing the DTU OAM information for determining~~ to be processed by said OAM capable nodes to determine the performance of the labeled segments of the subpath of the MPLS network;

wherein the ingress and egress nodes of said path have OAM capability and said path contains intermediate nodes having OAM capability.

38. (currently amended) The method of claim ~~35~~36, wherein the OAM information includes a time stamp, the nodes determining a transit time of the DTU along the subpath in accordance with the time stamp.

39. (currently amended) A label switched router (LSR) of a multi-protocol label switching (MPLS) network, the LSR for routing data transmission units (DTUs) in the MPLS network and for assessing a performance of the MPLS network, the LSR comprising:

an input module for receiving DTUs from an upstream node;
a switch for receiving the DTUs from the input module and for switching the DTUs;
an output module for receiving the DTUs from the switch and for transmitting DTUs to a downstream node; ~~and~~
a processor for defining a label for the DTUs in accordance with labeled segments of a subpath and for binding the label to the DTU, said labeled segments having been defined based on the OAM capability of nodes within said segments and between LSRs having an OAM capability, at least a subset of said nodes in said labeled segments are label switched routers (LSRs) having the OAM capability; and
a storage module for storing information regarding a processing of data transfer units (DTUs) labeled in accordance with the labels associated with the segments of the subpath.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yemane M. Gerezgiher whose telephone number is (571) 272-3927. The examiner can normally be reached on 9:00 AM - 6:00 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached at (571) 272-3922. The

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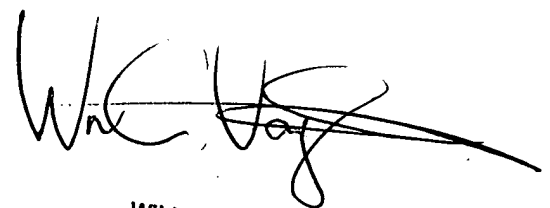
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fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YMG

Yemane M. Gerezgiher
Patent Examiner
AU : 2144, TC : 2100



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